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Title: Measurement of Z boson transverse momentum at the Tevatron

Abstract:

The Tevatron has delivered more than 1 fb^{-1} of proton-antiproton data with a center of mass energy of 1.96 TeV to the collider experiments. Using events containing two high P_T electrons, a measurement of the differential distribution $\frac{d\sigma(Z \rightarrow e^+e^-)}{dP_T}$ has been obtained. The new result has significantly smaller statistical errors than the previous measurement from DØRun I data. Since the uncertainties on the calculation of the ratio of the Z and W transverse momentum spectra are small, improved knowledge on the Z transverse momentum spectra, especially at low $P_T(Z)$, should help reduce the systematic uncertainty due to uncertainties in modeling W boson production in the W mass measurement.